Department of Energy

Portsmouth/Paducah Project Office
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Lexington, Kentucky 40513
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March 8, 2004

PPPO-02-530-04

Ms. Barbara Cornett
Manager, Enforcement Branch
Division of Waste Management
Kentucky Department for Environmental Protection
14 Reilly Road
Frankfort, KY 40601

Dear Ms. Cornett:

ERRATUM TO THE ABRIDGED VERSION FOR THE FINAL INVENTORY/CHARACTERIZATION REPORT FOR THE C-310-02 DEPARTMENT OF ENERGY MATERIAL STORAGE AREA AT THE PADUCAH GASEOUS DIFFUSION PLANT

Please accept this erratum to the Final Inventory/Characterization Report for the C-310-02 Department of Energy Material Storage Area at the Paducah Gaseous Diffusion Plant, dated August 22, 2003. The enclosed Executive summary should have stated **May 12, 2003** instead of **May 12, 2002** for the closure of the Satellite Accumulation Area within Department of Energy Material Storage Area C-310-02. All of the information has received a classification and technical review, and qualifies for release.

If you have any questions or require additional information, please call Craig Czuchna at (270) 441-6805.

Sincerely,

Gregory C. Bazzell
for William E. Murphie
Manager
Portsmouth/Paducah Project Office

Enclosure

cc w/enclosure:
R. H. Blumenfeld, PPPO/Lexington
G. Brewer, KDEP/Paducah
N. L. Carnes, CC-10
J. M. Guffey, KDEP/Frankfort
A. R. Hatton, KDEP/Frankfort
M. Williams/G. Morgan, KDEP/Paducah

cc w/o enclosure:
G. A. Bazzell, PPPO/Paducah
P. F. Clay, BJC/Oak Ridge
C. A. Czuchna, PPPO/Paduca
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T. J. Ellington, WESKEM/Kevil
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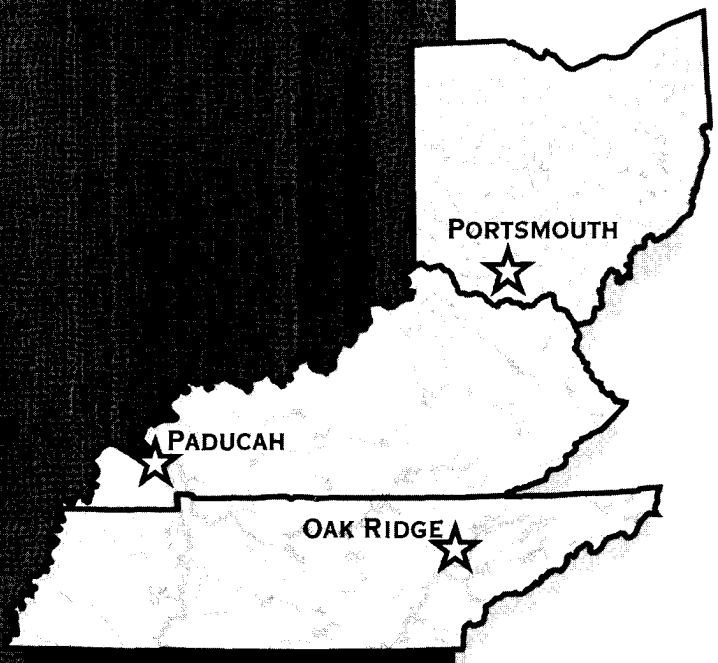
BJC/PAD-547/R1/E1

ENVIRONMENTAL MANAGEMENT
& ENRICHMENT FACILITIES
MANAGEMENT AND INTEGRATION CONTRACT

Final Inventory/Characterization Report for the C-310-02 Department of Energy Material Storage Area at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky



MANAGED BY
BECHTEL JACOBS COMPANY LLC
FOR THE UNITED STATES
DEPARTMENT OF ENERGY

BJCF-4 (8-98)

DEPARTMENT OF ENERGY · UNITED STATES OF AMERICA

This document has received the appropriate reviews for release to the public.

BJC/PAD-547/R1/E1

Final Inventory/Characterization Report for the C-310-02 Department of Energy Material Storage Area (DMSA) at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky

Date Issued – February 13, 2004

Prepared by
WESKEM, LLC
Under subcontract 23900-BA-RMOO5F
Prepared for the
US Department of Energy
Office of Environmental Management

BECHTEL JACOBS COMPANY LLC
managing the
Environmental Management Activities at the
East Tennessee Technology Park
Oak Ridge Y-12 Plant Oak Ridge National Laboratory
Paducah Gaseous Diffusion Plant Portsmouth Gaseous Diffusion Plant
Under contract DE-AC05-98OR22700
for the
U.S. DEPARTMENT OF ENERGY

EXECUTIVE SUMMARY

Department of Energy Material Storage Area (DMSA) C-310-02 is located on the east wall of the C-310 process building near columns E12/14-F12/14. It encompasses approximately 600 square feet (ft^2). This DMSA is also identified as Solid Waste Management Unit (SWMU) #231. Within the DMSA is a metal fenced area (cage) used for storage of excess laboratory equipment and supplies. The area surrounding the fenced cage was used for storage of electrical supplies, miscellaneous scrap metal and wooden items. Two metal B-25 storage containers are also located in the DMSA. Numerous Resource Conservation Recovery Act (RCRA) hazardous wastes such as circuit boards, fuses, light bulbs, aerosol cans, vacuum tubes and pump oils were identified in the DMSA. When identified, the hazardous wastes are classified as either "newly generated" or "newly discovered". This classification is explained in greater detail in the RCRA section of the Executive Summary. Recycling and offsite disposal of the circuit boards are also found in the RCRA section. Also identified were Toxic Substance Control Act (TSCA) polychlorinated biphenyl (PCB) capacitors and several asbestos containing materials (ACM). These regulated wastes are discussed further in the pertinent sections below. The waste and materials in the DMSA occupied a volume of approximately 1,112 cubic feet (ft^3) with an estimated weight of 16,377 pounds (lbs). Field activities in the DMSA were initiated in August 2002. Abatement of ACM occurred in March 2003. Completion of field activities occurred in May 2003. Future determinations may be made on waste and materials which could change their classification and /or disposition. This DMSA was classified originally as a Phase 2 DMSA. The DMSA now qualifies as a Phase 3 DMSA. Photographs were taken of the area and many of the individual items in the DMSA. Several of the photographs are included in this report.

RCRA/RCRA MIXED

Resource Conservation Recovery Act (RCRA) hazardous wastes are identified as either "newly discovered" or "newly generated". Newly discovered wastes are those hazardous wastes which are found loose or not installed in equipment. Examples of this waste type are aerosol cans or light bulbs lying on the floor. Newly generated wastes are hazardous wastes which must be removed from equipment (such as circuit boards) or drained from equipment (such as oils). These classifications are noted on the "Waste Removed from DMSA C-310-02" section of this report. Numerous circuit boards, two aerosol cans, six lithium batteries, several light bulbs, vacuum tubes and fuses were identified in the DMSA. Also small volumes of oils were drained from three pumps. As items/materials were characterized and classified as hazardous, they were packaged, labeled and transported to a RCRA permitted storage facility. The exceptions to this were the three containers of oils which were placed in a Satellite Accumulation Area (SAA) which was established within the DMSA on November 19, 2002. The aerosol cans were stored in the C-733 RCRA permitted storage facility which is designated for storage of ignitable wastes. The remaining hazardous wastes were stored in the C-752-A RCRA permitted facility. The lithium batteries were segregated from other wastes since they are reactive hazardous wastes. In May 2003, it was determined that the contents of two of the three containers of waste oils were consumed in the sampling and analytical process. The

containers were then verified as "RCRA empty" and placed in a low level waste (LLW) collection container. The third bottle of oil contained a small amount of oil. This waste was transported from the SAA to the C-752-A RCRA permitted facility. Documentation relative to these wastes was amended to reflect the change in status. The SAA was closed on May 12, 2003. The aerosol cans were classified as newly discovered hazardous waste. The remaining hazardous wastes were removed from equipment and classified as newly generated. In December 2002, the Department of Energy (DOE) provided guidance for the recycling of circuit boards which are not radiologically contaminated.[1] These circuit boards are not considered hazardous waste since they meet the scrap metal being recycled exclusion in 40 CFR Part 261.4 (a)(13). Large quantities of the circuit boards from C-310-02 met this criterion and were reclassified as nonhazardous and shipped offsite on February 18, 2003, to Advanced Environmental Recycling Company (AERC) in Allentown, Pennsylvania. The circuit boards which were recycled are indicated under the column "recy" on the DMSA C-310-02 Inventory Report as well as the Inventory and Characterization Report. The hazardous wastes in the DMSA which were radiologically contaminated were classified as RCRA/Mixed wastes. The circuit boards and vacuum tubes which were classified as RCRA/Mixed were shipped for disposal to Envirocare of Utah, Incorporated which is located in Clive, Utah, on May 2, 2003. This is noted on the Initial Inventory and Characterization Report and also on the Waste Identified for Removal Report.

TSCA/PCB/ACM

Twelve capacitors identified in C-310-02 were classified as Toxic Substance Control Act (TSCA) polychlorinated biphenyl (PCB) waste. The capacitors were radiologically contaminated thereby classifying them as PCB/low level waste (LLW). All of the PCB wastes were packaged, labeled and transported to the C-752-A permitted storage facility. Several asbestos containing materials (ACM) which were radiologically contaminated were abated and transferred to a Generator Staging Area (GSA) in DMSA C-333-28.

LLW

All of the materials remaining in the DMSA were classified as low level waste (LLW). The LLW types varied from small to large pieces of metal parts and equipment (such as tables and cabinets). Wooden item (such as shelves and scaffolding), paper, plastic and rubber items were also identified. Excess used laboratory equipment consisted of items such as a gas scrubber, combustible gas analyzer, an ozonator, denitrification unit and 24 small sources. Two large B-25 boxes are also stored in the DMSA. One contains cardboard, wood and plastic. The other contains miscellaneous pieces of lab equipment.

NCS

There were no Nuclear Criticality Safety (NCS) items identified in the DMSA. Nondestructive analysis testing was performed on the 24 laboratory radiological sources to determine assay. Evaluation of the data provided a classification of NCS exempt. The items were identified as coupons of depleted uranium metal.

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[1] Seaborg, W. Don December 31, 2002, Site Manager, Department of Energy, Paducah Site Office, letter to Robert H. Daniell, Division of Waste Management, Kentucky Department for Environmental Protection, Frankfort, Kentucky

IH

All Industrial Hygiene (IH) data to date have been reviewed. All quality control samples were within normal acceptable guidelines. No personnel were exposed to any airborne concentration above a permissible exposure limit (PEL) or threshold limiting value (TLV).

HP

Health Physics (HP) surveys which are conducted include smears, direct readings and air samples. Air samples are normally taken only in contamination areas and/or when opening containers with unknown contents. The highest total alpha reading from the radiological survey was 66,390 disintegrations per minute (dpm) per 100 square centimeters (cm^2). The highest total beta gamma was 14,930,657 dpm/100 cm^2. Both readings were from the 24 sources which were identified as coupons of depleted uranium metal.

SAFETY

There were no safety related events during the characterization program. Pre-job briefings were conducted with all entry and support personnel to ensure that individual responsibilities were understood. A safety officer was in attendance during all phases of work to monitor conditions and provide safety related input to workers. All workers had stop work authority to ensure that unusual or unexpected events were addressed before work was allowed to proceed.